



This guide was developed to showcase how beautiful gardens can embrace the local climate and celebrate local plants while preserving precious water resources. Everyone in Cyprus shares the responsibility to protect and manage the island's environment and natural resources as effectively as possible. Water is the most vital resource of all. *How Does Your Garden Grow* was developed by the Supporting Activities that Value the Environment (SAVE) Project. SAVE works to build local capacity to better protect and manage Cyprus' valuable natural and cultural resources. SAVE is implemented by International Resources Group (IRG) and funded by the United States Agency for International Development (USAID).

Additional copies can be downloaded at [www.save-irg.com](http://www.save-irg.com) or in hard copy by contacting SAVE at (+90) 392 228 1925 or (+357) 22 770 757.

# HOW DOES YOUR GARDEN GROW IN CYPRUS?

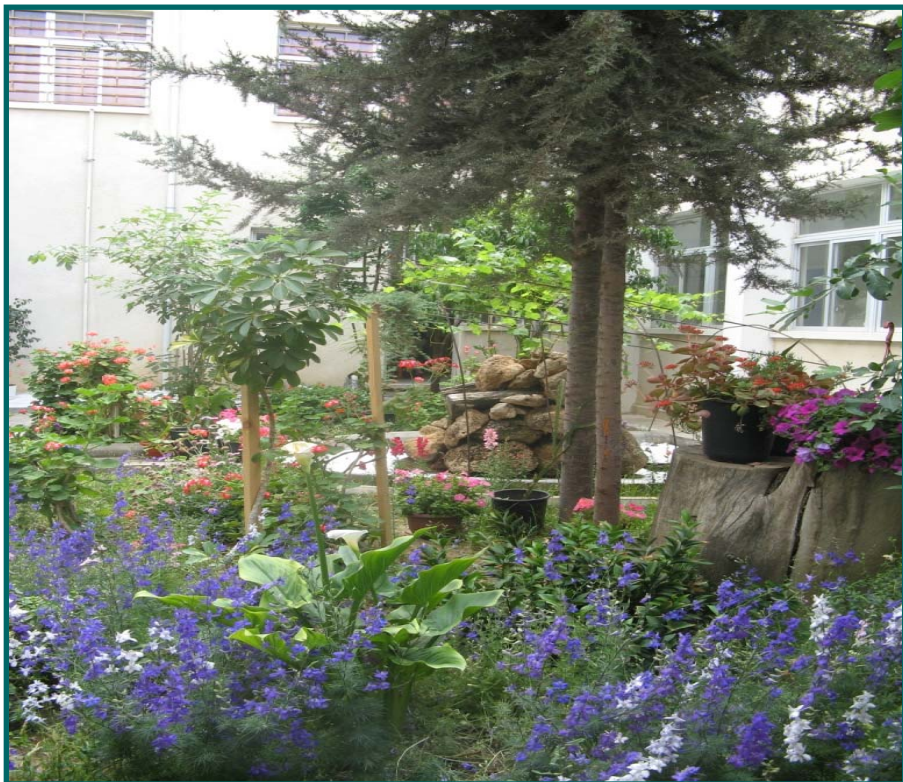


## A SIMPLE GUIDE TO WATER-WISE LANDSCAPING FOR BEAUTIFUL GARDENS



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## Local Resources

More information on water-wise gardening is available from:

Supporting Activities that Value the Environment (SAVE) Project. [www.save-irg.com](http://www.save-irg.com).  
Tel: (90) 392 228 1925; (357) 22 770 757

Chamber of Turkish Cypriot Agricultural Engineers  
Tel: (90) 392 227 1677, (90) 392 228 5210

Economic Development and Growth for Enterprises (EDGE) Project. Tel: (90) 392 227 0932

Mediterranean Garden Society

[www.mediterraneangardensociety.org](http://www.mediterraneangardensociety.org)

Email: [jcjoynes@cytanet.com.cy](mailto:jcjoynes@cytanet.com.cy)

Tel: (357) 25 932700

This brochure is available in both English and Turkish.

# Additional Resources & References

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## Plant Selection

Annie's Annuals and Perennials: Totally useful plant lists for Hot & Dry Climates.  
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# Water-wise Landscaping

This guide is for anyone that wants to know how to use the least amount of water possible and still maintain a beautiful flowering garden. The answer is water-wise landscaping, also known as xeriscaping.

Water-wise landscaping is ideal for the Cyprus household that wants a responsible alternative to traditional gardening. It is also perfect for holiday homes which may otherwise suffer from irregular maintenance. This does not necessarily mean a garden dominated by rocks and cactus. Water-wise landscaping minimizes water use by using plants acclimatized to the Mediterranean zone without compromising the garden aesthetics and also ensures that none of the water used in the garden is wasted. It is easy and cost-effective, so get started now!





# The Basics

You can transform your garden into a beautiful, water-wise landscape which you and your family can enjoy throughout the year.

## Step 1: Planning & Design

All good landscaping starts with a plan – from sketching out a basic design for your garden to hiring a landscape architect to design it – considering the water requirements, landscape budget, appearance, function and maintenance.

## Step 2: Soil Types

Plants grow differently in various kinds of soil. The soil in your garden has a major impact on how well your plants grow and how much watering they need.

## Step 3: Plant Selection

All plants need different amounts of water and have different ideal growing conditions. Plants need to be chosen based on how they look as well as their adaptability to Cyprus' climate.

## Step 4: Grass Use

Most grass needs a lot of water and maintenance, and ideally should not be used in Cyprus. However, if it is used, which types of grasses and where they are planted can make a world of difference.

## Step 5: Watering

A well-planned watering approach can save tons of water a year. Low-flow irrigation and water re-use can significantly reduce the amount of water used. Make sure that every drop counts.

## Step 6: Mulch Use

Mulch helps conserve water, reduce weed growth, and insulate the soil. Use mulch wherever possible.

## Step 7: Appropriate Maintenance

A well-tended garden uses less water. Even though water-wise gardens typically need less maintenance anyway, giving the appropriate care to your garden can keep it healthier, more beautiful and sustainable.

*Through these simple steps, you can help **SAVE** water, our most precious natural resource, with a beautiful garden that celebrates the richness and diversity of the island.*

## TIPS for Home Composting MADE SIMPLE!

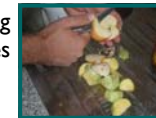
# How to Home Compost

### Step 1: Choosing a Composting Unit

- **Pile on the ground (compost heap)**—good if you have a large area away from the house. Cheapest method but requires regular maintenance to turn the pile and monitor moisture levels. Harder to keep moisture consistent throughout the year in Cyprus.
- **Stationary bin**—simple and cheap, but the compost can be difficult to stir in the bin.
- **Aerated cylinder bin**—good for urban gardens and requires little maintenance. It needs diligent layering of greens and browns, but little mixing, as compost is created as layers break down on top of each other.
- **Rotating bin**—ideal for Cyprus and produces almost foolproof compost, however they are hard to find and may have to be custom built. Need to have large garden space as unit is larger than other bins.

### Step 2: Collect the Right Kind of Garbage

- Chop big pieces before adding to the compost. Smaller pieces decompose more easily.
- Do not overload the composting pile or bin, otherwise compost will not get enough air.
- Avoid manure or feces from chickens or any meat-eating animal (like dogs or cats).



### Step 3: Dump in your Trash

- Remember the 3:1 ratio of browns to greens.



### Step 4: Keep It Mixed & Moist

- Do not add too much water at once, otherwise you may end up with clumps which can reduce the quality of the finished compost.
- Adding sawdust can help absorb excess moisture in the compost.
- Each kind of composter has slightly different maintenance needs. Know your unit.

### Step 5: USE IT!

- After 3 - 6 months, test if the compost is ready: Put some in a closed bag and check it after a week. If it smells like a forest floor, it is ready to use! Mix it into your garden top soil.

### How to Get the Compost Out

**Compost Pile**—turn the pile over and shovel out the mature compost from the bottom of the pile.

**Stationary Bin**—Dump the entire bin out upside down. Shovel out the mature compost from the bottom of the bin. Shovel remaining contents back into the bin.

**Aerated cylinder bin**—Open the door at the bottom of the bin and scoop out mature compost.

**Rotating bin**—Rotate the unit 2-3 times as mature compost should settle on top of the contents. Shovel it out, keep remaining contents in the bin.

### Why You Should Compost:

- Composting creates a 100% organic fertilizer.
- Compost actually improves the soil structure and enriches the plants.
- Home composting reduces or eliminates the need to buy commercial fertilizers or compost.
- Home composting cuts down on the trash in your house by around 30-40% and recycles it into a valuable product.
- Composting reduces pollution and greenhouse gases which contribute to climate change.
- Composting helps increase environmental awareness among the entire family, especially the kids, as well as the community.

# How to Home Compost

## Step 1: PICK YOUR COMPOSTER

"Home Composting Unit" can be as simple as a pile on the ground or as complicated as a purpose-built rotating compost bin. Some of the easiest options are shown here.



Pile on the ground



Stationary bin



Aerated cylinder bin



Rotating compost bin

## Step 2: COLLECT THE RIGHT KIND OF GARBAGE

Two types of garbage are needed: **Greens** and **Browns**.

**GREEN**  
(fresh)

Fruit and vegetable scraps, fresh leaves, grass cuttings, plant remains, old flowers and bedding plants, weeds (before going to seed), young hedge clippings, manure (plant-eating animals only and NO chicken manure)

**BROWNS**  
(dry)

Coffee grounds and filters, dry leaves and grass, old straw and hay, wood ash, cardboard (e.g. cereal boxes), paper bags and packaging, egg boxes, tea bags, paper towels, napkins

### DO NOT USE:

chicken manure, meat and dairy food scraps, fish, fats and oils, cat litter, dog feces, newspapers and glossy papers, plants infected with persistent diseases such as white rot, coal and coke ash, sprayed grass

## Step 3:



## DUMP IN YOUR TRASH

Just be sure for every layer of **greens** (like kitchen scraps), you add 3 times as many **browns** (like dry leaves) at the same time.

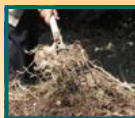
## Step 5: USE IT!

In 3-6 months, you will have your very own organic compost for the garden. Even better, your composter should now produce compost almost continuously from this point forward.



## Step 4: KEEP IT MIXED & MOIST

Mix it regularly. Keep the ingredients damp, but not wet, either by mixing in extra greens or browns, or by sprinkling in water.



Turn over the compost heap each time you add something to it.



Stir up the ingredients in your stationary bin once a week.



Stir once a month, adding new layer on top. Be sure greens are layered with 3x their volume in browns.



Rotate the bin once a day.

# Step 1: Planning & Design

Start by asking yourself the following:

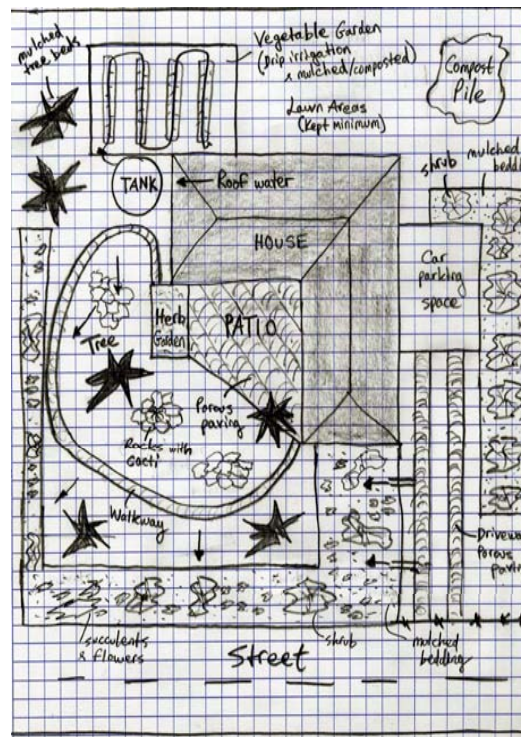
- What do I want my garden to look like?
- What do I want to do in my garden?
- How can I make the best use of water available to me for a colorful garden?
- How will the season affect the overall look of the garden?

Then create a plan based on these four factors:

- Water Conservation
- Appearance
- Functionality
- Budget

This step can be as simple as plotting the space and design ideas on a piece of paper or as elaborate as hiring a professional landscape architect.

Garden planning and design has to look at the entire space including plant areas, walkways, paving, seating and dining areas, play areas and driveways. You should identify the water sources for your garden—wells, hose pipes, the back door (source of easy kitchen water re-use), storm drains, etc.—and group plants and lawn areas that need the most water within easy access of suitable water sources. For example, flowering plants can be grouped right outside patio doors to benefit from household water re-use and to provide a splash of color that will be most visible from within and outside of the house.



## Considerations

- Sketch out what you want your garden to look like. This helps you organize your ideas and get an overall sense of your plan.
- For plants with more frequent watering and maintenance needs, place them near your water source and where you will be able to access them more often and easily, like closer to your patio.
- Group plants with similar watering and maintenance needs together.
- Place delicate plants in shady areas.
- Capture rain water from your roof or channel rain water from your sidewalks and paving toward plant beds and lawn areas.
- Use the natural contours of your garden to help with watering.



## Step 2: Soil Type

When designing and planting your garden, it is important to know your soil type. It determines how much water is held in the soil and stays in the ground near your plants' roots. Once you know your soil type, you can either add "soil amendments" to change it to an optimum soil type or pick plants well-adapted to that soil. Almost all plants grow best in "medium" soil.

### How to Determine your Soil Type

Pick up a handful of the dirt in your garden and squeeze it in your hand. Check the chart below.

**Medium Soil** is ideal for most gardens. It falls in between light and heavy soils. It sticks together when damp and becomes muddy. It does not feel too loose or too compact when dry. With moderate water-holding capacity, it lets water pass through the soil—but slowly enough to let plants pull the water they need from it.



**Heavy Soil** sticks together in a hard ball when damp and stains your hand. It has a high clay content, which blocks most of the water from reaching plants' roots. It becomes hard and crackly when dry. The red soil of Cyprus is considered a heavy soil, which also has a high nutrient content.



**Light Soil** feels loose and does not stick together when damp. It is mostly sandy with some clay and silt, and has a coarse texture. Because of this, water drains through it very quickly, often too quickly for your plant to absorb it.

### Other Soil Considerations - pH



In Cyprus, the recommended pH range (soil acidity) for healthy plant growth is 6.5 to 7.5. Home pH test kits are available at local garden centers. If your soil pH is outside this range, consult with your local nursery or an agricultural engineer to determine the proper amendments, such as limestone, to bring your soil to the recommended pH range. Besides adjusting pH levels, soil amendments can also be used to improve your soil.

## Step 7: Appropriate Maintenance

**A well-maintained garden needs less water and a water-wise garden needs less maintenance.**

**Follow these simple tips to keep your garden in great shape which saves water and time.**

- Weed your garden regularly. Not only are weeds unsightly but they drink the water intended for your plants.
- Mow the grass correctly; as a general rule, cut the grass when it is one-third higher than the desired height. Grass that is too short dries more quickly. Leave the grass clippings where they fall as a natural layer of mulch to eventually turn into nutrients for the grass, or use them for composting.
- Use compost or make your own compost in your garden if you can! You can then recycle the waste from your garden and kitchen back into the soil.
- Non-native plants may need additional nutrients for healthy growth. If so, fertilize them wisely, preferably using compost or grass clippings.



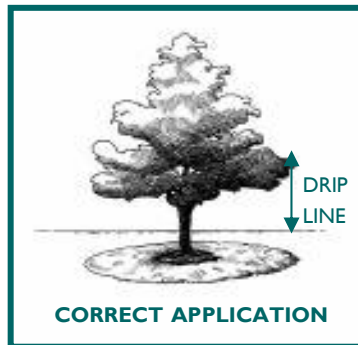
- Try using natural methods of pest and disease control such as introduction of beneficial insects (e.g., ladybugs or beetles). Always choose the least toxic methods possible. Applying chemicals is not the safest method for your family's health and may actually harm the garden as they spread to other non-targeted plants and kill harmful as well as beneficial insects.



## Step 6: Mulch Use

### COMMON PROBLEMS—BEWARE!

- Mulch is not compost or fertilizer, therefore it should not be mixed into the soil
- Applying the mulch layer too thickly can trap moisture and cut off oxygen to the roots, causing root rot.
- Mulch that is too thin may not properly retain moisture and will allow more weed growth.
- Fine-textured mulch can become matted, which prevents water and air penetration and enhances weed growth. It needs to be raked regularly to break up clumps.
- Piling mulch, especially moist organic mulch, against the trunk or stems of plants can stress plant tissues, and may lead to insect and disease problems.



### PROPER MAINTENANCE

- Replenish organic mulch as it decomposes, roughly every six months. Replenish inorganic mulch as it is compacted down, every 1-3 years
- Rake old mulch to break up matted layers.

Type of Mulch	Uses / Benefits
Leaves / Woodchips	Use for any plants and trees. Provide nutrients and are aesthetically pleasing.
Grass Clippings	Use for vegetable gardens. Provide nutrients and can be collected from home lawn.
Compost	Use for all soil types and plants. Provides nutrients and improves soil quality and composition but can be expensive.
Pine needles	Use with acid-loving plants such as roses. Provide good weed control and water retention.

**Organic mulch is available at some local garden centers. Construction companies and landscape designers can also provide mulch in the form of wood chips, gravel or brick chips as part of construction or landscaping services. You can also make your own mulch by using grass clippings, leaves or pine needles.**




## Step 2: Soil Type

### How to Improve Your Soil

Now that you know your soil type, you know what you can add to it. For all soil amendments, add and mix them into the top soil thoroughly before planting for maximum benefit. Below is a quick guide for the soil amendments you need. Regardless of soil type, you can add compost or leaf mould to provide nutrients and improve soil texture, water retention, and drainage.

You can find different soil amendments at most garden centers in Cyprus. Manure is typically sold at stores where you purchase animal feed. You can also ask local agricultural offices for guidance on where to find these amendments.



Type of Soil	Water Retention Capacity	Type of Amendment
		
<b>Medium (loamy/silty)</b>	Moderate / Optimum	<b>Organic amendments / nutrients</b> Add nutrients such as compost, manure or organic fertilizers as necessary based on the needs of your specific plants.
<b>Heavy (clay-like)</b>	High	<b>Porous amendments; Organic amendments</b> Add amendments that make the soil more porous, such as sand. Mix in organic matter, such as compost, leaf mould or manure until overall soil reaches consistency of "medium" soil.
<b>Light (sandy)</b>	Low	<b>Clay-rich soil; Organic amendments</b> Mix in "heavy" soil and organic amendments (compost, manure, etc.) to light soil until it reaches consistency of "medium" soil.



## Step 3: Plant Selection

Plant selection is important because the plants dictate how much water your garden will need. Water-wise landscaping focuses on choosing only plants that are suitable to local climate conditions and then ensuring that plants with similar watering needs are grouped together. As you know, Cyprus' Mediterranean climate means long, dry summers and infrequent heavy winter rains. Many plants are ideally suited to these conditions. In addition, several years of drought have placed water restrictions on most households; so there is even more reason to pick plants that can thrive without the hose pipe.

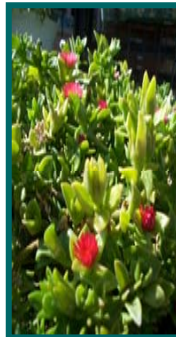
The place to start is local plants, which are naturally acclimatized, and other plants from Mediterranean climate regions. Avoid tropical plants or any that require regular or heavy watering.

Some of the things to consider when selecting your plants include:

- What colors do I want to see in my garden?
- Do I want a shady area for the hot summer days?
- What kind of plants do I want? Flowers, fruit trees, herbs, scented plants, etc?
- Do I want greenery all year round? Flowers all year round?

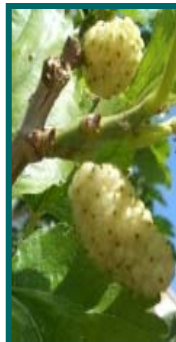
Featured below are examples of typical sun-loving Cypriot plants:

**Rosemary** – this savory herb is indigenous and grows wild throughout Cyprus. It is a staple in Cypriot cuisine – its crushed leaves produce scented oil while whole leaves are used to flavor food and sweets. The flowering leaves are used during the Greek Orthodox Easter celebrations to decorate Christ's tomb.



**Cat Claws** – A common succulent on the island, cat claws are very drought-tolerant with their fleshy leaves that store water and grow with minimal maintenance. They provide a natural groundcover dotted with flowers that bloom in summer.

**Olive Tree** – the most Cypriot of plants. Cypriots regard the olive tree as a symbol of peace, prosperity and victory. It produces olives and olive oil; the fruit is eaten by many bird species; and dried leaves are used as incense. Many Cypriots believe that its very aroma protects households from the evil eye.



**White Mulberry Tree** – With its delicious fruit – a favorite for kids as well as adults – this tree was once heavily planted for producing silk. Its large leaves were the source of food for silkworms and various domestic animals. It provides valuable shade in the garden for the hot summer days.



Using mulch is an ideal way to cope with the dry and hot climate and ongoing water scarcity issues in Cyprus.

## Step 6: Mulch Use

Applying mulch around the base of every plant in your garden or orchard lets you:

- **Water plants less** – mulch helps the soil retain water
- **Pull fewer weeds** – mulch inhibits weed growth
- **Protect the soil** – mulch forms a protective layer so top soil does not blow away
- **Insulate the soil** – mulch shields soil and roots from extreme heat or cold
- **Provide a finished look** – mulch makes your garden look neater and cleaner as soil and mud are neatly covered over

Mulch is a layer of organic or inorganic material placed over the root zone of plant.

**Organic mulches** include materials like grass clippings, straw, wood chips, bark chips, leaves and pine needles. Organic mulch will eventually **decompose** adding organic matter to the soil, and needs to be supplemented or replaced on a regular basis.

**Inorganic mulches** include stones, gravel, landscape fabric and brick chips. Inorganic mulches typically **do not decompose**, need replacement only occasionally, but are often more expensive.

### Step by step mulch application:

- STEP 1** - Check soil drainage in the area to be mulched.  
**STEP 2** - Apply a 5 to 8 cm layer of mulch over well drained soils. Use a thinner layer on poorly drained soils.  
**STEP 3** - The wider the mulch layer, the greater the benefit.  
**STEP 4** - Lay organic mulch as wide as the tree's drip line. The drip line is at least defined by the outer edge of a tree's branches.  
**STEP 5** - Lay organic mulch 2.5 to 5 cm away from the trunk. The mulch layer should resemble a ring instead of a volcano.

**Tip:** It is best to mulch at the beginning of the growing season although it does not hurt to add it to your garden any time.





## Step 5: Watering



### Water Re-use for Gardening



There are alternative water sources for irrigating your garden besides tap or well water. These can be as simple as capturing and re-using rinse water from your kitchen or as sophisticated as re-using treated wastewater from a home-based or communal wastewater treatment system. Advantages of using alternative water sources for irrigation are not limited to saving water or lowering your water bills, but also showcasing an alternative irrigation method.



Imagine all the water that goes to waste without thinking during your day-to-day activities at home. You can easily capture at least some of it and use it on your plants. Capture:

- Water used to rinse fruits and vegetables
- Cold water runoff while the shower or bath water heats up
- Dropped ice cubes
- Even dirty bath water or dish water: just be sure that soapy water is only used on ornamental plants, not herbs, fruits and vegetables that will be eaten.



You can also go that extra step and use more sophisticated water re-use systems to water your garden, especially if you have a big one. You can build these systems yourself or have them built by a specialty service provider.

Some of the systems that can be used to generate garden irrigation water are:

- Grey water recycling, such as re-use of water from your washing machine or bath water,
- Rain-water harvesting and re-use, and
- Wastewater re-use from a home-based wastewater treatment system.

There are other handy tips you can follow for water re-use or efficient water use for your garden:


- Use a broom instead of a hose to clean your driveway or sidewalk and save 40 liters of water every time.
- Direct downspouts and other runoff like air conditioning water drain towards shrubs, trees and flowerbeds, or collect and use for your garden.
- Use a hose nozzle and turn off the water while you water your plants.
- Next time you add or replace a flower or shrub, choose a low water-use plant for year-round landscape color.



## Step 3: Plant Selection

The following is a representative list of hardy and sun-loving plants best suited to our climate and available at most nurseries in Cyprus.

Plant Type	Plant Name	Approximate SUMMER watering needs
Cacti	Agave	1 drop
	Aloe	
	Prickly Pear	
Trees	Lemon	2 drops
	Loquat	
	Olive	
	White Mulberry	
	Persian Lilac	
	Pomegranate	
Succulents	Cat Claws	2 drops
	Hardy Ice Plant (trailing)	
	Sedum	1 drop
Shrubs	Native Rock Rose	1 drop
	Caper	2 drops
	Cyprus Bosea	
	Fleabane	
	Myrtle	
	Geranium (trailing)	3 drops
Climbers	Cypriot Jasmine	3 drops
	Bougainvillea	2 drops
	Honeysuckle	
Herbs	Mint	1 drop
	Native Sage	2 drops
	Rosemary	
	Basil	3 drops
	Lemon Thyme	
Grasses	Pampas	2 drops
	Purple Maiden Grass	
	Bermuda	
	Fescue	
	Lippia Repens	

 Needs watering once a month  
 Needs watering once a week  
 Needs watering twice a week

**NOTE:** This schedule is for the **dry summer season**, and should be halved during the rainy season.

## Step 4: Grass Use

Traditional grass lawns are not actually traditional for Cyprus and should be avoided as they have the greatest watering needs. This is especially true for holiday homes which are empty for large parts of the year – there is no need to water a large green lawn that gets used for only a few months. However, if you still love your grass too much to give it up, then selecting the right kind of grass and the right place to plant it can make all the difference.

A water-wise lawn means using low-water drought-tolerant grass varieties. Selectively and strategically deciding where they should go is the next step. Lawns should be used in combination with making the most of patios, walkways and other planting areas. Keep grass areas limited. Ensure that lawns can benefit from rainwater runoff to cut down on watering needs. Also, be sure to only water lawns when they need water, not on a preset schedule. Consult with your local nurseries for the various types of grasses best-suited to our climate and available in Cyprus. Examples include grasses such as *Bermuda*, *Lippia Repens* and *Purple Maiden* among others.

Careful consideration of aesthetics and functionality of grass areas can help you incorporate them into your water-wise landscape. You can still have green areas, but patios, decorative areas, or walkways can be great alternatives or fillers.

**Keep in mind that narrow areas and small odd-shaped areas are difficult for any irrigation equipment to efficiently water.**



**You can water and maintain blocky grass areas more easily and efficiently.**



Bermuda Grass



Lippia Repens

*Efficient watering is all about making the most of every drop that goes into your garden.*

## Step 5: Watering

Whether you are watering by hand or with a state-of-the-art drip irrigation system, how and when you water matters. A well-planned approach to irrigation can save tons of water a year. How much water you should give to your plants depends on a variety of factors, such as:

Soil type  Plant type  Mulch being used  Time of year

### Watering Advice:



Too wet!

- Let the soil partially dry out before watering again. The soil will look less dark than wet soil, but not be completely dried out and looking crumbly or hard and cracked.
- Know the recommended water needs for your plant and soil type. For example, you do not need to water cactus as much as mint or geraniums.
- Mature (established) plants do not need as much watering as new plants.
- Water less during the rainy winter months.



Too dry!



Low-flow irrigation



Drip irrigation

- Irrigate during the coolest times of the day, early morning and evening, when you lose less water to evaporation and the wind.
- Use low-flow irrigation, such as a drip irrigation system, a container with a spigot, or just a hose pipe with a low flow-rate. Ensure water is delivered directly to the base of the plant. Let the soil absorb the water slowly, reaching the roots of the plants. Sprinklers are one of the least efficient ways to water.
- Pay attention while you water so that you do not overwater.
- Water your plants only – not the hardscape (i.e. pavement, tiles, driveway, sidewalk)
- Use mulch around your plants. It is one of the easiest and cheapest ways to keep the water in the soil as long as possible for your plants. If using drip irrigation, place the drip lines underneath the mulch.



Mulch with drip irrigation